(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

c'd PCTPTO 12 JAN 2005 CORRECTED VERSION

(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 19 February 2004 (19.02.2004)

PCT

(10) International Publication Number WO 2004/015839 A1

(51) International Patent Classification 7:

H02J 7/00

(21) International Application Number:

PCT/IB2003/003408

(22) International Filing Date:

30 July 2003 (30.07.2003)

(25) Filing Language:

Italian

(26) Publication Language:

English

(30) Priority Data: TO2002A000690

2 August 2002 (02.08.2002)

- (71) Applicant (for all designated States except US): ELTEK S.P.A. [IT/IT]; Strada Valenza, 5A, I-15033 Casale Monferrato (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): COLOMBO, Paolo [IT/IT]; Sp. Borgolio, 106, I-15100 Alessandria (IT). BIGLIATI, Marco [IT/IT]; Via Montegrappa, 4, I-13039 Trino (Vercelli) (IT).
- (74) Agents: BUZZI, Franco et al.; Buzzi, Notaro & Antonielli d'Oulx S.r.l., Via Maria Vittoria, 18, I-10123 Torino (IT).

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- (48) Date of publication of this corrected version:

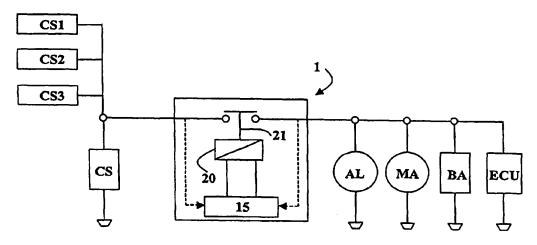
29 April 2004

(15) Information about Correction:

see PCT Gazette No. 18/2004 of 29 April 2004, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PROTECTION SYSTEM OF A VEHICLE BATTERY



(57) Abstract: A system for protecting the battery of a vehicle comprises a device (1) for electrically disconnecting of connecting the battery (BA) with respect to an electric load (CS); the device (1) comprises switch means (20, 21) and a microprocessor control circuit (15). The control circuit (15) comprises means for calculating a mean value of voltage of the battery (BA) and comparing it with a threshold value, in order to control the switch means (20, 21). The threshold value is variable as a function of the ambient temperature and the time of inactivity of the motor, and the switch means comprises a bistable electromagnetic arrangement, capable of passing from a first to a second stable condition following a pulse generated by the control circuit (15).